

**Notice of Allowability**

Application No.

09/699,435

Examiner

James S. Wozniak

Applicant(s)

MURASHIMA, ATSUSHI

Art Unit

2655

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to 11/19/2004.

2.  The allowed claim(s) is/are 1-48.

3.  The drawings filed on 31 October 2000 are accepted by the Examiner.

4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All    b)  Some\*    c)  None    of the:

1.  Certified copies of the priority documents have been received.

2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.

(a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached

1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.

(b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**

7.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_.
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application (PTO-152)
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.

*Susan M. Fadden*  
SUSAN MCFADDEN  
PRIMARY EXAMINER

**DETAILED ACTION**

***Response to Amendment***

1. In response to the office action from 7/19/2004, the applicant has submitted an amendment, filed 11/19/2004, amending Claims 1-3, 47, and 48 for grammatical purposes, while arguing to traverse the art rejection based on the limitation regarding the limiting of a smoothed gain value based upon the amount of fluctuation calculated from the unsmoothed and smoothed gain (*Amendment, Pages 24-25*).
2. Based on the amendments to Claims 1 and 48, the examiner has withdrawn the previous objections directed towards minor informalities.

***Response to Arguments***

3. Applicant's arguments, with respect to Claims 1-3, 15-17, 27-29, 47, and 48 have been fully considered and are persuasive. Thus, the rejection of the aforementioned claims and further dependent claims has been withdrawn and are allowable for the reasons noted below.

***Allowable Subject Matter***

4. **Claims 1-48** are allowed.

5. The following is an examiner's statement of reasons for allowance:

With respect to **Claim 1**, the prior art of record does not specifically teach or explicitly suggest the recited claim language regarding a filter for speech decoding capable of limiting a smoothed gain value based upon an amount of fluctuation calculated from the unsmoothed and smoothed gain according to the fluctuation and limiting equations listed on pages 40-41 of the specification.

Although Jarvinen et al (*U.S. Patent: 5,960,389*) does teach a method of gain limiting based on the comparison of a gain difference to a threshold (*Col. 10, Lines 15-48*), the difference is between a particular gain and a median of a set of excitation gains in which the gain is contained and the limiting and difference calculations do not utilize the equations of pages 40-41 of the specification. In the present invention the calculated fluctuation and further smoothed gain limitation involves a fluctuation between smoothed and unsmoothed versions of a single gain parameter. Furthermore Gao (*U.S. Patent: 6,507,814*) fails to explicitly teach or fairly suggest the aforementioned step of gain fluctuation and limiting when taken alone or in combination with Jarvinen.

Additionally, it would not have been obvious to one of ordinary skill in the art to modify the teachings of the prior art of record to obtain the recited claim limitations above.

**Claim 2** contains subject matter similar to **Claim 1** (*Amendment, Page 25*), and thus, is allowable over the prior art of record for those same reasons noted above, wherein an excitation norm is utilized as the gain, calculated according to the equations on page 43 of the specification.

**Claim 3** contains subject matter similar to Claim 2 (*Amendment, Page 25*), and thus, is allowable over the prior art of record for those same reasons noted above, in combination with the additional step of the identification of a noise or speech segment.

**Claims 15-17** contain subject matter similar to Claims 1-3, respectively, and thus, are allowable over the prior art of record for the same reasons noted above.

**Claims 27-29** contain subject matter similar to Claims 1-3, respectively, and thus, are allowable over the prior art of record for the same reasons noted above.

**Claim 41** is allowable over the prior art of record because it utilizes the same gain limiting method recited in claim 1. Additionally, Claim 41 is allowable over the prior art of record for those reasons noted in the office action from 7/19/2004.

**Claims 47 and 48** contain subject matter similar to Claims 1 and 2 (*Amendment, Page 25*), respectively, and thus, are allowable over the prior art of record for those same reasons noted above.

**Dependent claims 4-14, 18-26, 30-40, and 42-46** are allowable over the prior art of record because these claims depend from claims that have been determined to be allowable over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

***Conclusion***

6. The claims have been renumbered as followed for patent publication purposes:

Claim 2 has been renumbered to Claim 6- Claim 2 (6), and:

Claim 3 (12), Claim 4 (2), Claim 5 (7), Claim 6 (13, Claim 7 (8), Claim 8 (14), Claim 9 (3),  
Claim 10 (9), Claim 11 (15), Claim 12 (4), Claim 13 (10), Claim 14 (16), Claim 15 (18), Claim  
16 (22), Claim 17 (26), Claim 18 (19), Claim 19 (23), Claim 20 (27), Claim 21 (20), Claim 22  
(24), Claim 23 (28), Claim 24 (21), Claim 26 (29), Claim 27 (30), Claim 28 (33), Claim 29 (37),  
Claim 30 (31), Claim 31 (34), Claim 32 (38), Claim 33 (35), Claim 34 (39), Claim 35 (32),  
Claim 37 (40), Claim 38 (5), Claim 39 (11), and Claim 40 (17).

7. Any inquiry concerning this communication or earlier communications from the  
examiner should be directed to James S. Wozniak whose telephone number is (703) 305-8669  
and email is James.Wozniak@uspto.gov. The examiner can normally be reached on Mondays-  
Fridays, 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's  
supervisor, Doris To can be reached at (703) 305-4827. The fax/phone number for the  
Technology Center 2600 where this application is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding  
should be directed to the technology center receptionist whose telephone number is (703) 306-  
0377.

James S. Wozniak  
12/20/2004

*James M. Farkh*  
SUSAN MCFADDEN  
PRIMARY EXAMINER